ENGINEERING ALUMNI NEWS

UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE AND ENGINEERING
VOLUME 17 • NUMBER 1 • FEBRUARY, 1971

NOMINATIONS SOUGHT FOR CHANCELLOR

Dr. O. M. Solandt, having served with distinction, the maximum of two three-year terms, retires as Chancellor of the University of Toronto, on June 30, 1971. His retirement occasions the selection of a new Chancellor and in this selection the U. of T. Alumni play an instrumental role. The Chancellor is nominated by the graduates of the U. of T. in accordance with the requirements spelled out in the University of Toronto Act.

Your Council has appointed a Committee chaired by Bob Moore 4T5 to co-ordinate our participation in the Chancellor selection and any suggestions or nominations should be directed to Bob, care of Alumni House, as soon as possible.

Following are details of eligibility, nomination and voting. Please read and please act, as this is our opportunity to get the best person to head the affairs of the U. of T. through the challenging, changing times that lie immediately ahead.

ELIGIBILITY FOR THE OFFICE

The Chancellor must be a British subject and his (or her) customary place of residence must be in Ontario. He must not be a member of the academic or administrative staff of the University or of any of its federated or affiliated Colleges, nor may he be a member of the governing body of any of the Colleges.

The Chancellor normally holds office for three years, after which he or she may be re-elected just once.

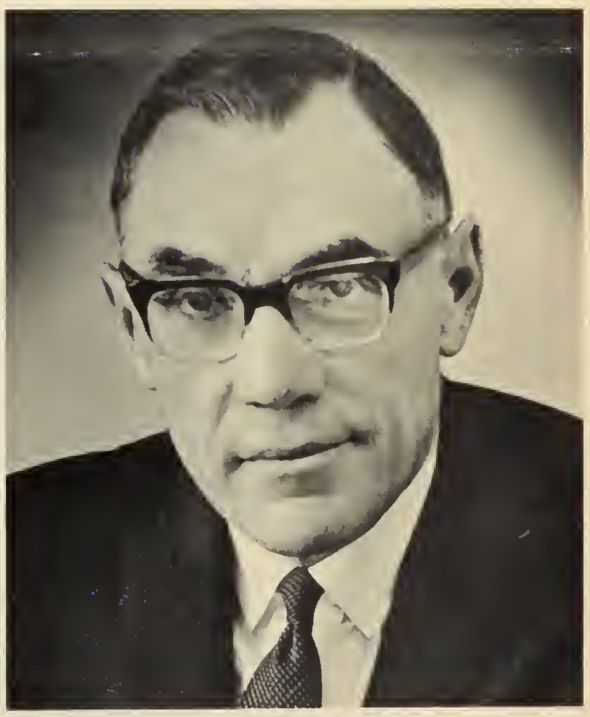
NOMINATIONS: WHO AND HOW

Anyone entitled to vote at Senate elections may nominate a candidate for the Chancellorship. This includes anyone who has received a degree from the U. of T. or from a Federated University, or who has received a Diploma recognized by the Senate. There are no special nomination forms. Each nomination must be

- *in writing*
- *signed by at least 10 graduates*
- *substantiated by the nominee's consent in writing*
- *accompanied by a biographical sketch of the nominee*
- *in the hands of the Secretary of the Committee of Elections through the Office of the Registrar, Simcoe Hall, by not later than Wednesday, April 7, 1971.*

ELECTION: WHO AND HOW

The President of the U. of T. Alumni Association and the 51 elected members of the Senate (who represent the 120,000 graduates of the University) comprise the Committee of Election, which does the actual voting. The vote is by secret ballot. The successful candidate must have a clear majority. If no such majority is obtained on the first ballot, the candidate receiving the least number of votes is dropped and the process is repeated until a clear majority is obtained.



DR. O. M. SOLANDT

The Act is not absolutely specific about the duties of the Chancellor. He confers degrees; he is an "ex officio" member of the Board of Governors and of the Senate; he is the Honorary President of the U.T.A.A.; and probably most importantly, he alone has the authority to convene Convocation. This is a group which can be called together in cases of significant emergency for the University. This, happily, has not occurred since the early part of this century, but Convocation is there to be called, if necessary, by the Chancellor. Convocation consists of all graduates of the University and of federated Universities and Colleges, members of the Board and of the Senate, and teaching staff at the rank of Assistant Professor and above on the staff of the University, University College and the federated Universities and Colleges.

But the person of the Chancellor can bring and has brought much more to the University. The significance — the impact — of the office depends very much upon the nature of the incumbent. The University has been fortunate in the past. It falls now to all graduates to ensure that candidates are nominated who can lead the University into the challenge of the future.

Engineering Alumni News
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THE ENGINEERING ALUMNI ASS'N
OF THE
UNIVERSITY OF TORONTO
President .... *F. T. Gerson*
Secretary .... *P. B. Walters*
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Chairman — J. G. Cowan
ALUMNI HOUSE, UNIVERSITY OF TORONTO
TORONTO 5 - ONTARIO

ENGINEERS WIN VARSITY FUND TROPHY

Varsity Fund Telethon Trophy won by Engineering with top percentage of phone pledges.

Alumni of the Faculty of Applied Science and Engineering won the 1970 Telethon Trophy for achieving the highest participation of pledges made during the Spring and Fall Varsity Fund Campaign.

Of all the Engineers contacted during the telethon, 46.7% pledged to make a donation. Private giving to the University of Toronto through the Varsity Fund, and the associates of the U. of T. in the United States, together with related appeals raised $528,460.00. Of this amount, 4,075 Engineers contributed $75,181.00.

In the Spring Telethon for 1971, about 6,000 Engineers in Metro Toronto and Western Ontario will be phoned. This operation will require about 300 volunteers and to start the ball rolling Jim Lewis, 4T8, Chairman of the 1971 Telethon has appointed Michael Bishop, 4T8, Jim Blayney, 4T5, Bill Chakeris, 5T3, Stewart Halliday, 6T1, and H. L. Hinchcliffe, 3T2, as Division Directors. From their efforts will grow the teams of Faculty chairmen, Enlistment Captain and Canvassers to man the phones.

The Telethon begins on Monday, March 1st, 2nd, 3rd, 4th, 8th and 9th, at which time canvassers will be enlisted. Each canvasser will come out to the University one night (Monday, Tuesday or Wednesday) from March 15th to April 1st for the actual appeal.

We hope that your generosity will be sustained, and that this year, Engineers will again top the list of contributors. It may be worthy of note that this publication, as well as all activities of the Engineering Alumni Association are fully dependent for financial support upon contributions you make to the Varsity Fund.

B.C. ENGINEERS' REUNION

The British Columbia Engineering Alumni Graduates of the U of T held their 52nd annual meeting on January 30, at the Engineers' Club in Vancouver. President W. H. Reid, 5T6, greeted a good turnout.

6T1 — 10 YEAR REUNION

The Class of 6T1 Engineers are planning a big hoot in recognition of 10 years of survival since Graduation in 1961. The program will feature a dinner and dance and will tie in with the U. of T. Fall Homecoming on the October 24th weekend. A committee has been organized and a later newsletter will tell members details of the events. Meanwhile, all 6T1's are urged to keep this weekend open.

NEW CONCEPT IN NUCLEAR REACTORS FOR U OF T RESEARCH

The Uranium-235 fuel assembly for the SLOWPOKE reactor is inspected by three U of T graduates involved with the project. They are Mr. G. J. Thomson, B.A.Sc. (4T8) P.Eng., Department of Physical Plant at U of T and Engineering Alumni Councilor; Dr. J. W. Hilborn, Atomic Energy of Canada scientist and a principal collaborator in the development of SLOWPOKE; Dr. R. E. Jervis, Professor of Chemical Engineering at U of T and Chairman of the SLOWPOKE Committee.

A new type of nuclear reactor called SLOWPOKE is soon to be installed in the Mill Building (now known as the Environmental Science and Engineering Building) on the campus of the University of Toronto. The SLOWPOKE reactor was designed and built by Atomic Energy of Canada Limited (AECL) in order to meet the growing demand from various research organizations for neutron sources costing much less to build and operate than the conventional research reactors, but yielding a thermal neutron flux density several orders of magnitude higher than those derived from nuclear isotopes. Tests performed on the new reactor at the Chalk River Nuclear Laboratories of AECL give every indication that the design objectives will be fulfilled, and the arrangements between AECL and U of T for the University operation of the reactor are expected to demonstrate the many applications which the reactor can have in a multi-faceted research environment as is present on the U of T campus.

The new reactor will be used jointly by research groups in the Faculty of Arts and Science and the Faculty of Medicine as well as in the Faculty of Applied Science and Engineering. The projected applications of the reactor include neutron activation analysis techniques for trace analysis of environmental contamination and the production of specific short-lived radionuclides which can be used as tracers in Engineering, Biological and Medical research. Many new techniques in these fields are expected to be developed by virtue of the proximity of the reactor facility.

One of the reasons why the SLOWPOKE reactor is relatively inexpensive to install and operate is that special design considerations render the reactor incapable of ever reaching excessive power. This feature is due to a large negative temperature coefficient of reactivity so that heating the reactor core itself automatically limits the rate of fission. The inherent safety of the device eliminates special safety features and the sizeable operating staff normally required in a reactor building. Further savings derive from the fact that, at the moderate operating power levels, the initial fuel loading is expected to last ten years. Taking these features into account, it is not surprising that SLOWPOKE stands for "Safe Low-Power Critical Reactor Experiment".

The principal applications of SLOWPOKE at the University will be in medical research and in environmental science and engineering — areas of great social importance. SLOWPOKE also symbolizes a strengthening of the trends for more cooperation between the University and industry.

ENGINEERING ALUMNI SCHOLARSHIP WINNERS

M. R. THEROUX

J. S. BOLTON

G. PARRAVANO

T. ESCHLE

C. E. NORMAN

As part of its Engineering Education Award program, your Alumni Association annually presents seven, one thousand dollar entrance scholarships to top students applying to Engineering at the University of Toronto.

This year's winners, listed below, represent the best of tomorrow's young Engineers and are fine assets to the Faculty. It is perhaps not surprising that all winners were initially attracted to Engineering Science, (the old Eng. Phys.), probably the most demanding undergraduate engineering course in Canada. In the past 5 years, your Alumni Association has awarded, under the current program, 34 Scholarships totalling $34,000.00.

At a recent meeting, we caught some pictures of some of the winners and thought you would be interested in knowing a little more about them.

I. BARUSS*

Imants Baruss is nineteen years old and enrolled in Engineering Science. He was born in England and is of Latvian descent. He maintains a strong interest in this ethnic group and its culture and literature. He is responsible for publishing a Latvian youth newspaper to serve the some 10,000 Toronto and Hamilton Latvian community. Imants has a very broad range of interests from sports through music, (he sings in two choirs) and includes a deep interest in people and the influences that motivate them. He enjoys his course, particularly the theoretical side, but has not yet selected a specialty.

J. S. BOLTON

John Stuart Bolton was born in Toronto 18 years ago and attended Northern Secondary School. He entered the Faculty of Applied Science, registering in Engineering Science, but has since found his interests to be in Civil and has changed to this Course. In his spare time he enjoys music and automobile racing.

B. R. CHRISTIE*

Blair Christie comes to Engineering Science from St. Andrews College where he obtained his highschool education. He was born in Winnipeg, and, as his father is in the Armed Forces, he has lived in many places in Canada during his 18 years. Blair says he is at Toronto specifically as a result of winning an Engineering Alumni Scholarship and that without the Scholarship, he would probably have gone to Waterloo. Blair enjoys his course and, while he has not made firm a decision feels he may like to combine engineering with medicine, perhaps in Bio-medical Electronics. Blair is active in all sports and is a member of the Varsity Blues swim team.

T. ESCHLE

Tomas Eschle was born in Germany and immigrated to Canada with his family as a child. He attended Oakwood Collegiate Institute and enrolled in Engineering Science at the Faculty. He feels his interests will ultimately take him into some form of Electrical or Computer Engineering. Tom is an enterprising fellow who works steadily in a part time job and is planning to add a wife to his responsibilities before the end of his school session.

C. E. NORMAN

Charles Norman comes from "Super-suburb" where he attended Bramalea Secondary school. He is enrolled in first year Engineering Science and in his words "doing fine". Charles is living in residence in New College and is managing to find time for a few extra curricular activities. (And if you have seen New College you will know this is not difficult). Charles is presently interested in a career in research and enjoys subjects involving theoretical physics and applied mathematics.

G. PARRAVANO

Guiseppe Parravano was born in Italy, but has lived nearly all of his 18 years in Canada. Guiseppe attended Alexander Muir Public School, then Oakwood Collegiate (where he met co-winner of Engineering Alumni Scholarship, Tomas Eschle). He finished his high school at Vaughan Road Collegiate and has kind words for many teachers there who helped him. Guiseppe is enrolled in Engineering Science and is a bright and personable lad. In his words he is "doing fairly well" with an average of 91% in the first semester. He feels he would like to ultimately be involved in Aerospace study.

M. R. THEROUX

Marcel Theroux is seventeen years old and comes to Toronto from North Bay where he attended Scollard Hall. Marcel is staying in residence at New College and finds time out from his course in Electrical Engineering to study photography and avant garde music (not the L.G.M.B.). Marcel's particular interests are in integrated circuits and applied mathematics and he will probably choose a career in the Computer field.

We would like to offer proud congratulations to these lads for their scholastic achievements and to wish them continued success in their academic and professional careers.

**Unfortunately we were unable to obtain pictures of Mr. Baruss and Mr. Christie in time for publication.*

Assistant Dean and Secretary of the Faculty of Applied Science and Engineering, J. A. Gow, congratulates Engineering Alumni Entrance Scholarship Winners From left: J. S. Bolton, C. E. Norman and M. R. Theroux Each of these lads received a $1,000.00 scholarship from the Engineering Alumni Association.

The bust of John Galbraith looks on as Alumni Chairman F. T. Gerson (left) offers pearls of experience to Alumni Scholarship Winners T. Eschle and G. Parravano (right)

SPRING REUNION

1T1 — 2T1 — 3T1 — 4T6

This year, Spring Reunion Day for the Classes of 1911, 1921, 1931 and 1946 will be Saturday, June 5. Circle the date on your calendar NOW! Better still, circle the whole weekend so you'll be sure to be on hand for all the festivities.

The University of Toronto Alumni Association through its Spring Reunion Committee brings all reunion classes of all colleges, faculties and schools together on campus on Saturday, June 5. The carillon will ring out, a blue and white canopy outside Hart House will be headquarters for registration, there will be a buffet luncheon in the Great Hall, the quadrangle will be open where you can sit and catch up on the news of your classmates, and tours (by bus or walking) will be available so you can see the changes on campus and in your favourite haunts.

The highlight of the day will be the cocktail-garden-party-reception at the home of President and Mrs. Claude Bissell. Dr. and Mrs. Bissell are the most gracious of hosts, and the grounds and gardens are worth a visit in themselves. As you know Dr. Bissell will retire from the University on June 30 and I am sure you will be pleased to have this opportunity to meet him and wish him well in his future career.

A special program for Engineers has been arranged to tie in with the University wide reunion. You will be contacted by your class representative in the near future, and the next issue of the Alumni News will have full particulars of the events. Meanwhile, the following representatives will be working on organizing activities and would like to hear from you.

Class of 1T1

Harry Pullan, 45 Gardiner Rd., Apt. 215,
Toronto 349.

R. K. Northey, 6 Forest Glen Crescent,
Toronto 12.

Class of 2T1

M. C. Stafford, 111 Mildenhall Rd., Toronto 12.

Class of 3T1

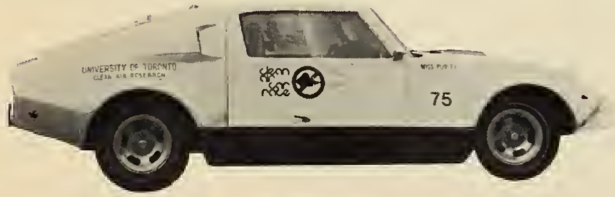
John Franklin, 113 Hawthorn Dr., Baie d'Urfe,
Quebec.

E. J. Sheare, 545 Blythwood Rd., Toronto 12.

Class of 4T6

M. R. Davidson, 143 Glenrose Ave., Toronto 7.

ASSOCIATES OF N.Y. GIVE $11,000 TO HELP POLLUTION-FREE CAR SEARCH



MISS PURITY

Dean James Ham reports that the Faculty of Applied Science and Engineering has received a gift of $11,000 from the Associates of the University of Toronto Inc., New York, towards an ongoing project in U of T's search for a pollution-free automobile, which began with the victory of "Miss Purity" in the transcontinental Clean Air Car Race.

As an initial step, a multidisciplinary committee has been formed to establish a plan of action. The committee includes representatives from Mechanical and Electrical Engineering and from the Cockburn Unit that was set up with funds left to the Faculty by a former professor of Engineering. Chairman of the committee is Dr. Frank Hooper of Mechanical Engineering. Prof. I. W. Smith, Mechanical Engineering, a member of the committee, has been appointed project executive director.

Prof. Hooper said that the initial objectives will be to analyse the lessons learned from "Miss Purity" and to establish the general form of a new vehicle. "Miss Purity" finished sixth, only 90 minutes behind the leading car at the end of the 3,600-mile marathon. Arrival placing and time were only two of a large number of factors taken into consideration in declaring the final result, however. "Miss Purity" was adjudged co-winner in her class, the electro-propane hybrids.

Prof. I. W. Smith said the aim of the group would be to draw upon the University's many fields of expertise in the design and construction of a low-pollution vehicle suited to typical Canadian operations. He emphasized that the present grant would serve to get the project started but that substantial additional funds would be required, probably in excess of $100,000.

"Miss Purity" was built in approximately four months, at a cost of about $40,000, provided mainly by estates of two former engineering professors, J. Roy Cockburn and William A. Wallace. It also received support from industry in the form of some parts, materials and technical advice.

CLASS OF 5T0

GOLF TOURNAMENT

AND

GENTLEMEN'S DINNER

AT

BURLINGTON
GOLF AND COUNTRY CLUB

•

FRIDAY, MAY 14, 1971

GRADUATES' JOB CRISIS

⇦ ***FORMER READY PLACEMENT***

VS

PRESENT DIGGING FOR A JOB ⇨

This year, for the first time since the late fifties, graduating Engineers must really hustle to get jobs! For the past few years, it had become the rule that prospective employers come to the University and queue up to obtain Engineering Graduates. Under this system, the Engineering neophyte would select from a list of job offers the one that was most attractive to him. This year the situation has changed. The number of companies visiting Campus in November 1970 was down over 40% from 1969. Further, those companies visiting generally had fewer positions to fill. In the early sixties some 250 companies sent recruiting teams to the University; this year about 90 firms were involved. Even those Companies which came to Campus appear to be reluctant to offer jobs. Placement Director, David Currey, reports that from a sampling of Engineers who took part in the Job Interview Program only 29% have as yet had job offers. The employer now has the edge on the supply/demand balance and it is the Graduates who must queue up for jobs.

This of course does not spell disaster for graduates. It is unrealistic for them to feel the world is just waiting for them to finish University and will rush forward to greet them as soon as they receive diplomas. This, however, is not to say they are not required. They are still needed and wanted but, the main difference now is that they will have to show their initiative as well as their ability at an earlier stage. At this stage, there are simply fewer positions to go around.

DEAN HAM, IN RECOGNIZING THE PROBLEM, WROTE TO UNDERGRADUATES IN AN OPEN LETTER TO TOIKE OIKE AND SAID IN PART

"If you came to our Faculty only with the aim of getting a "job" and settling down with middle-class solidity in the megalopolis, be gone. Canada is a big and turbulent place. If you want to be a chief before you prove yourself to be a good Indian, acquire modesty before it is too late. If you will be disappointed if someone doesn't offer you an opportunity to optimize the design of nonlinear non-Newtonian multivariable solidstate gadgetry I offer you my consolation. . . . Who are you and what can you do? The major component in you is your intrinsic endowment of talent. You should and must desire opportunity to stretch this endowment to the limit and discover what you really can do. Parenthetically, the sad thing to me about students who don't work as students is not that they fool their parents or have a gay time but rather that they sell themselves short by not discovering their own intellectual elastic limits. . . ."

"Let a potential employer know that you are interested in using the wits you have, whatever they are. Does it matter really on what problems or in what situations you exercise your talents? As to technical subject matter, my answer is a definite "no". Then why bother to graduate in mechanical, chemical or what have you? The main reason is to develop talent to recognize and dig into particular kinds of problems using a base of understanding built upon a coherently related set of subjects. The "profile" of the coherent set distinguishes it as being mechanical, electrical, civil, etc. The way you have learned to go about tackling problems is the guts of engineering, not the particular content. This is the engineering role as distinct from the job.

"Real challenges exist to him who would find them in every company in every functional part of it, be it development, design, production, sales, etc. You should, with modesty, convince an employer that you want to use your wits to help improve things (anything you can understand) and not just to perform in a "slot" (even though we must perform). Ideas on improving productivity are useless of course if the enterprise goes bankrupt because the existing production methods are not sustained in the iterim.

"Engineering is based upon understanding, creating and managing technological change as an agent for shaping, with economy of resources, the physical, informational and organizational environment for man. It concerns hardware, software and people. Seek for an opportunity to use your talents on the problems of your employer (he has dozens). You may use your chemistry and if you do and like chemistry, hurray! But then again, you may not.

"The economy cannot get along without us even if the economy can temporarily get along. There are more roles to be carried out than there are "jobs" on the lists. Fifteen years from now most of you will be managers of some sort. In 1971 you may be devising better ways to wash dishes. Many good entrepreneurs end up starting their own businesses that way!"

WHAT CAN WE AS ALUMNI DO TO HELP IN THIS PROBLEM?

Firstly, we can treat with respect and genuine interest the many enquiries we are bound to receive for job openings in the next few months. Secondly, we can pay particular concern to directing graduating Engineers to possible job opportunities that come to our attention. (This can be done by notifying the University Placement Service). Thirdly, and more specifically, if *you* are planning to hire a young Engineer, do it now! The time for you could not be better. There are probably more capable, and interested Graduates on Campus now, looking for jobs, than at any period in the past few years.

The University of Toronto Placement Service will be happy to help you in contacting interested Engineers. As a service to Undergraduates, Graduates and to Industry, the U. of T. Career Counseling and Placement Centre operates a job referral system where applicants are registered by training and interests. Potential employers can be matched with suitable applicants. This system under Director David Currey has been operating successfully for some time, but now has more applicants than employers. If you need a good Engineer, this may be the way to find him. Contact David Currey, B.A.Sc., Career Counseling and Placement Centre, 581 Spadina Ave., telephone 928-2537. (Incidentally the Service is operated by the University and will *not* cost you one month's salary.)

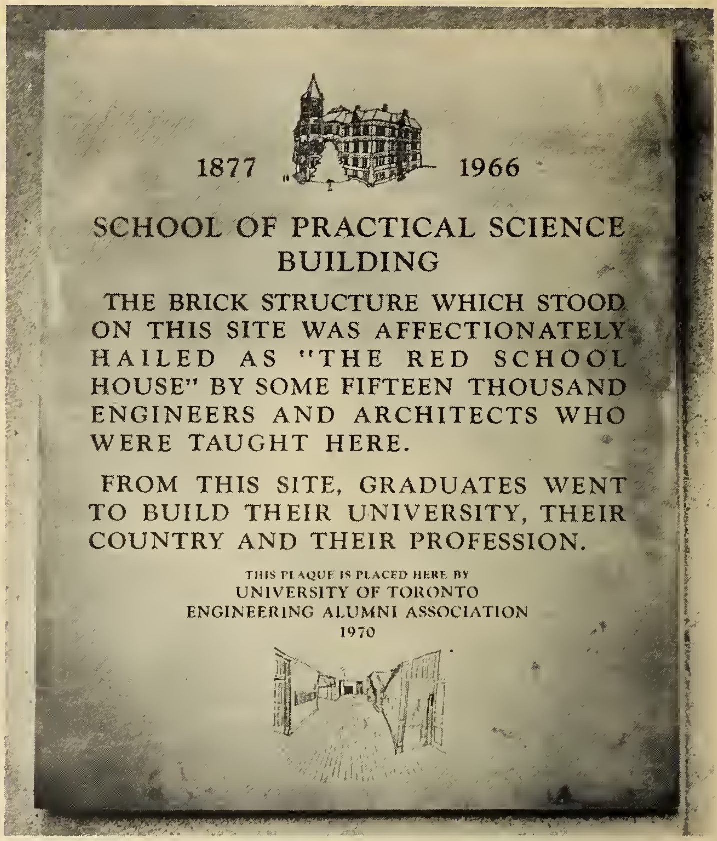
This service is particularly suitable to small firms that can not afford the expensive hiring programs maintained by larger firms. Here is an opportunity for you to get access to top flight employees without fighting toe-to-toe with Shell Canada, Imperial Oil or IBM.

ALUMNI PLAQUE COMMEMORATES "SCHOOLHOUSE"

To those who look for a raid on the Meds or a caper further afield when they hear the sometimes-tortured cacophonies of the Lady Godiva Memorial Band, a dignified and utterly peaceful ceremony at the north-west corner of the Medical Sciences building must have been a source of minor mystification. There Dean A. L. Chute, Medicine, and Dean James Ham, Applied Science and Engineering, were peacefully assembled with other members of the two Faculties and alumni, to unveil a plaque commemorating long years when engineers and architects occupied and were taught on the site.

A strong contingent of about 200 Engineers and guests braved the cold drizzle to watch the unveiling of the plaque by Alumni president F. T. Gerson '47 and by Dean Ham. While there was no disguising the nostalgia felt by engineers present, Dean Chute told them to take heart from the fact that, if medical men were only belatedly becoming aware of the contributions that engineers can make to medicine, the examples of fruitful co-operation, typified by the University's own Institute of Bio-medical Electronics, are every day increasing.

The unveiling was followed by a reception in Hart House. The handsome bronze plate that now marks the site of the old Red Schoolhouse building was the gift of the Alumni and made possible through Alumni gifts to the Varsity Fund.



1877 1966

SCHOOL OF PRACTICAL SCIENCE
BUILDING

THE BRICK STRUCTURE WHICH STOOD ON THIS SITE WAS AFFECTIONATELY HAILED AS "THE RED SCHOOL HOUSE" BY SOME FIFTEEN THOUSAND ENGINEERS AND ARCHITECTS WHO WERE TAUGHT HERE.

FROM THIS SITE, GRADUATES WENT TO BUILD THEIR UNIVERSITY, THEIR COUNTRY AND THEIR PROFESSION.

THIS PLAQUE IS PLACED HERE BY
UNIVERSITY OF TORONTO
ENGINEERING ALUMNI ASSOCIATION
1970

This plaque on the Medical Sciences Building perpetuates the fact that the old Red Schoolhouse, original home of Applied Science and Engineering, stood on this site.

Ted Gerson, President of Engineering Alumni (left) and Engineering Dean James Ham take a close look at the plaque marking the site of the Red Schoolhouse.

Dean Ham addresses undergraduates and alums at unveiling of plaque marking site of the old Red Schoolhouse

Medicine's Dean A. L. Chute tells the Engineers how glad he is that his faculty could provide so splendid a background for their Red Schoolhouse plaque.